

Appln No. 10/821,266
Amdt date January 25, 2007
Reply to Office action of October 27, 2006

REMARKS/ARGUMENTS

Claim Amendments

Claims 1, and 8 have been amended by incorporating independent claims 6 and 12 respectively. Specifically, claims 1, and 8 now have a surface roughness range of at least 10Å and claims 6, 12, and 19 have been canceled because they are now redundant. Claims 21-35, and 37 and 39-41 have been withdrawn from consideration because of the earlier filed response to the restriction requirement. No new matter was added.

35 USC 102 Rejections

Claims 1-5, 8-11, 14-18, 36, and 38 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by US 6,239,547 to Uemura et al. Applicants respectfully traverse for at least the following reasons.

Uemura et al. discloses an electron emission source but does not disclose a surface roughness. Amended independent claims 1, and 8 of the present invention recite a surface roughness of at least 10Å.

To anticipate a claim, the reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d. 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ2d. 1913, 1920 (Fed. Cir. 1989). Therefore, all claim elements and their limitations must be found in the prior art reference to maintain a rejection based on 35 U.S.C. § 102(b).

Uemura et al. fails to disclose each and every element of amended independent claims 1, and 8. Specifically, Uemura et al. fails to disclose the surface roughness of the emission source. In fact, there is no mention of surface roughness anywhere in Uemura et al. The term surface roughness does not appear anywhere in the Uemura et al. reference. Uemura et al. does not identify any benefits of having a surface roughness, does not discuss any preferred surface

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roughness for the Uemura et al. composition. By contrast, the specification of the present application describes, among other things, the significance of the surface roughness (page 5 lines 6-13.).

Accordingly, Uemura et al. does not anticipate claims 1 and 8 and the corresponding dependent claims 4-5, 9-11, 14-18, 36, 38, and withdrawal and reconsideration of the rejections is respectfully requested.

35 USC 103 Rejections

Claims 6-7, 12-13, and 19-20 have been rejected under 35 USC 103(a) as allegedly being unpatentable over Uemura et al. as applied to claim 1. Applicants respectfully traverse for at least the following reasons.

As discussed above, Uemura et al. discloses an electron emission source but does not disclose a surface roughness. Amended independent claims 1 and 8 of the present invention recite a surface roughness of at least 10Å.

MPEP § 2144.05 II(B) states that "[a] particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) (The claimed wastewater treatment device had a tank volume to contractor area of 0.12 gal./sq. ft. The prior art did not recognize that treatment capacity is a function of the tank volume to contractor ratio, and therefore the parameter optimized was not recognized in the art to be a result-effective variable.). Uemura et al. does not disclose or suggest surface roughness as a result-effective variable and thus it would not have been obvious from Uemura et al. to make the present invention.

Because Uemura et al. does not teach or suggest independent claims 1 and 8, it does not teach corresponding dependent claims 6-7, 12-13, and 19-20. Therefore, reconsideration and withdrawal of the rejections are requested.

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Conclusion

Applicants submit that the claims are allowable over the cited art. However, if there are any remaining questions that can best be addressed by an interview, the Examiner is asked to contact Applicants' counsel at the number below.

Respectfully submitted,

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